Synergistic effects between gelling agents: *The Konjac case*

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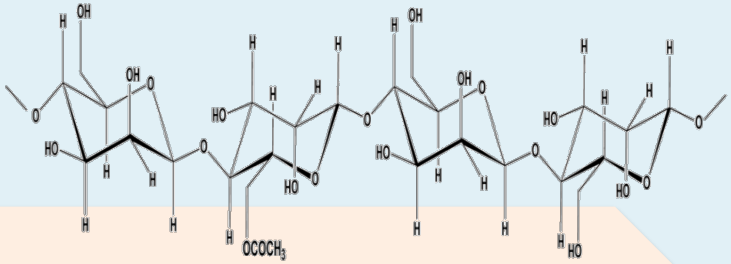
OBJECTIVES

① Understand different gelling agents and their properties
② Observe how the properties of a gel change when it is mixed with another
③ Analyse the differences with the two types of synergism studied
④ Understand the application of gels in food industry



KONJAC: a future gelling agent

Asian

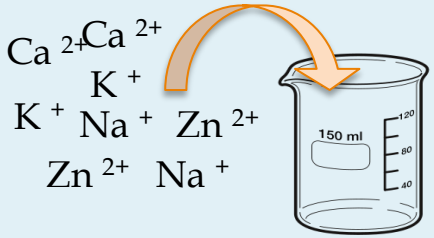
Amorphophallus Konjac tuber

Polysaccharide ↑ viscosity

↑ gelling power

Gellan gum+ Konjac	**Ovalbumin+ Konjac**
→A **softer gel** is obtained →Gel with ↑ **viscosity** → ↑ **Tª** →**less pseudoplastic** behaviour	→ A **harder gel** is obtained →Gel with ↑ **viscosity** → ↑ **[konjac]** stabilize the protein against denaturation

↑ **[cations]** in the solution helps to create a harder gel
Cause electrostatic interactions



CONCLUSIONS

The applications of these different types of gels are very different and it all depends on the quantities of each gelling agent and what we want to obtain.
They are often used as **food wrapper** and as **substitutes for fat** in meats.